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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/528,890 | 03/23/2005 | Hermann Hofbauer | 10901/95 | 1573 |
| 26646 | 7590 | 06/21/2006 | | |
| KENYON & KENYON LLP ONE BROADWAY NEW YORK, NY 10004 | | | EXAMINER CHERRY, STEPHEN J | |
| | | | ART UNIT 2863 | PAPER NUMBER |

DATE MAILED: 06/21/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

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|------------------------------|--------------------------------------|--|--|
| Office Action Summary | Application No. 10/528,890 | Applicant(s) HOFBAUER ET AL. | |
| | Examiner Stephen J. Cherry | Art Unit 2863 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 March 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 18-35 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 18-33 and 35 is/are rejected.
- 7) ☒ Claim(s) 34 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 March 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>3-23-2005</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

The drawings are objected to because each of the boxes of figures 1 and 2 should include a label describing the function performed. For example, the box labeled 100 in figure 1 should include the description "sequential electronics". Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 18-31 and 35 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent Application Publication 2001/0001540 to Okamuro et al.

Regarding claim 18, Okamuro discloses a method for operating a position-measuring device connected to sequential electronics via a communication unit, the position-measuring device including a signal-generating unit configured to generate positional data, comprising:

- (a) transmitting data between the signal-generating unit and the communication unit via an internal interface unit ('540, fig. 1, data from 12 and 14 is transmitted to multiplexer, 16, and par. 50-57);
- (b) transmitting measurement-data request instructions, transmitted from the sequential electronics to the position-measuring device, to the signal-generating unit to immediately generate measurement data, bypassing the internal interfacing unit ('540, fig. 1, output of 24 to sample and hold, 15); and
- (c) transmitting the positional data, generated in accordance with the measurement-data request instructions, from the signal-generating unit to the communication unit via the internal interface unit ('540, fig. 1, data transmitted through multiplexer, 16, and A/D, 17 to microcomputer, 18).

Regarding claim 19, and in view of the rejection of claim 18, above, Okamuro discloses a method according to claim 18, wherein the measurement-data request instructions are transmitted in the transmitting step (b) to the signal-generating unit via a separate data channel ('540, fig. 1, output of 24 to sample and hold, 15).

Regarding claim 20, and in view of the rejection of claim 19, above, Okamuro discloses a method according to claim 19, wherein the measurement-data request instructions are transmitted in the transmitting step (b) to the signal-generating unit via a separate connecting line ('540, fig. 1, output of 24 to sample and hold, 15).

Regarding claim 21, and in view of the rejection of claim 18, above, Okamuro discloses a method according to claim 18, further comprising identifying measurement-data request instructions by the communication unit in a data stream transmitted from the sequential electronics ('540, fig. 1, output of 24 is identified by sample and hold, 15).

Regarding claim 22, and in view of the rejection of claim 21, above, Okamuro discloses a method according to claim 21, further comprising separating measurement-data request instructions identified in the identifying step from the data stream sent by the communication unit to the internal interface unit ('540, fig. 1, output of 24 to sample and hold, 15, separated by CPU, 25).

Regarding claim 23, and in view of the rejection of claim 22, above, Okamuro discloses a method according to claim 22, further comprising conditioning the measurement-data request instructions separated in the separating step so that a transmission to the signal-generating unit occurs substantially free of delay ('540, output of CPU 25 conditioned by output circuit 24).

Regarding claim 24, and in view of the rejection of claim 18, above, Okamuro discloses a method according to claim 18, further comprising requesting, in addition to the positional data, further measurement data derived from the positional data from the position-measuring device via the measurement-data request instructions ('540, paragraph 50, multi-turn counter information).

Regarding claim 25, Okamuro discloses a position-measuring device, comprising:

- a signal-generation unit configured to generate measurement data ('540, fig. 1, ref 12);
- a communication unit, the position-measuring device connected to sequential electronics via the communication unit ('540, fig. 1, ref. 18);
- an internal interface unit configured to transmit data between the signal-generation unit and the communication unit ('540, fig. 1, ref. 15, 16, and 17); and
- a redirection device configured to transmit to the signal-generation unit measurement-data request instructions transmitted from the sequential electronics to the position-measuring device to immediately generate measurement data by bypass of the internal interface unit ('540, fig. 1, data redirected by CPU 25 to sample holding section 15).

Regarding claim 26, and in view of the rejection of claim 25, above, Okamuro discloses a position-measuring device according to claim 25, wherein the redirection device includes a separate data channel between the communication unit and the signal-generation unit ('540, fig. 1, output of 24 to sample and hold, 15).

Regarding claim 27, and in view of the rejection of claim 26, above, Okamuro discloses a position-measuring device according to claim 26, wherein the data channel is arranged as a separate connecting line ('540, fig. 1, output of 24 to sample and hold, 15).

Regarding claim 28, and in view of the rejection of claim 25, above, Okamuro discloses a position-measuring device according to claim 25, wherein the redirection device includes a unit configured to identify measurement-data request instructions in a data stream transmitted from the sequential electronics and to separate identified measurement-data request instructions from the data stream ('540, fig. 1, output of 24 to sample and hold, 15, separated by CPU, 25).

Regarding claim 29, and in view of the rejection of claim 25, above, Okamuro discloses a position-measuring device according to claim 25, wherein the communication unit is configured for bidirectional, serial communication between the position-measuring device and the sequential electronics ('540, fig. 1, ref 19 and 20).

Regarding claim 30, and in view of the rejection of claim 25, above, Okamuro discloses a position-measuring device according to claim 25, further comprising a further signal-processing device between the signal-generation unit and the internal interface unit configured to process generated positional data ('540, fig. 1, ref. 16).

Regarding claim 31, and in view of the rejection of claim 25, above, Okamuro discloses a position-measuring device according to claim 25, further comprising: an addressing channel configured for data transmission from the internal interface unit to the signal-generation unit ('540, connection of CPU 25 to 24); and

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a data-transmission channel configured for data transmission from the signal-generation unit to the internal interface unit ('540, connection of data from 14, through 15, 16, 17, 23 to 25).

Regarding claim 35, Okamuro discloses a position-measuring device, comprising:

signal-generating means for generating measurement data ('540, fig. 1, ref 12);

communicating means, the position-measuring device connected to sequential electronics means via the communicating means ('540, fig. 1, ref. 18);

internal interface means for transmitting data between the signal-generating means and the communicating means ('540, fig. 1, ref. 15, 16, and 17); and

redirection means for transmitting to the signal-generating means measurement-data request instructions transmitted from the sequential electronics means to the position-measuring device to immediately generate measurement data by bypass of the internal interface means ('540, fig. 1, data redirected by CPU 25 to sample holding section 15).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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Claims 32 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Application Publication 2001/0001540 to Okamuro et al in view of Horowitz and Hill, page 495.

Regarding claims 32 and 33, Okamuro discloses a position-measuring device, comprising:

a signal-generation unit configured to generate measurement data ('540, fig. 1, ref 12);

a communication unit, the position-measuring device connected to sequential electronics via the communication unit ('540, fig. 1, ref. 18);

an internal interface unit configured to transmit data between the signal-generation unit and the communication unit ('540, fig. 1, ref. 15, 16, and 17); and

a redirection device configured to transmit to the signal-generation unit measurement-data request instructions transmitted from the sequential electronics to the position-measuring device to immediately generate measurement data by bypass of the internal interface unit ('540, fig. 1, data redirected by CPU 25 to sample holding section 15);

an addressing channel configured for data transmission from the internal interface unit to the signal-generation unit ('540, connection of CPU 25 to 24 and 16); and

a data-transmission channel configured for data transmission from the signal-generation unit to the internal interface unit ('540, connection of data from 14, through 15, 16, 17, 23 to 25).

However, Okamuro does not disclose the details of the clockline to devices including multiplexor.

Further regarding claims 32 and 33, Horowitz and Hill disclose a multiplexor with multiple address lines, serial addressing channel and data channel which operates synchronously with clock signal "E".

Thus, it would have been obvious to one of ordinary skill in the art to implement the invention of Okamuro with the multiplexor and associated circuitry of Horowitz and Hill to allow the transmission of data from multiple sensors with a single CPU input (see "540, fig. 1).

Allowable Subject Matter

Claim 34 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

Claim 34 recites, "wherein the clock signal on the data clockline includes a clock signal on an address clockline of the addressing channel delayed by a signal propagation time in the signal-generation unit". This feature, in combination with the remaining claimed structure avoids the prior art of record.

Conclusion

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen J. Cherry whose telephone number is (571) 272-2272. The examiner can normally be reached on M-F 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Barlow can be reached on (571) 272-2269. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

SJC



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